



The Real Estate ANALYST

APRIL 26
1940

Roy Wenzlick
Editor

A concise easily digested periodic analysis based upon scientific research in real estate fundamentals and trends...Constantly measuring and reporting the basic economic factors responsible for changes in trends and values....Current Studies....Surveys....Forecasts

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VOLUME IX

REAL ESTATE ECONOMISTS, APPRAISERS AND COUNSELORS

MATERIAL COSTS FOR A STANDARD FRAME HOUSE

THE Home Loan Bank Board began publication in January 1936 of quarterly fluctuations in building cost of a standard six room frame dwelling in eighty-one cities. In the Home Loan Bank Review for February 1936 they gave the specifications for this house and again, in July 1938, showed a drawing and floor plans of "a house that follows the standard house specifications." On the following page we show a house which we believe is better designed, and also follows their specifications. The cubic cost of their house and of ours is almost exactly the same at the present time.

Real Estate Analysts, Inc., is interested in what has happened to construction costs over a period of years, and so has re-estimated the cost of this house, built in Saint Louis, over the period from 1913 to date. Our files contain actual material and labor bills over this entire period. In this report we show the fluctuations of all material costs. A later study will show all labor and overhead items over the same period. The fluctuation of labor costs has been quite different from the fluctuation of material costs.

The general description of this six room colonial frame residence is as follows: the house proper has a cubic content of 23,792 cubic feet, and the attached garage of 1,575 cubic feet, or a total cubic content of 25,376 cubic feet.

In brief the plans and specifications call for concrete foundations, concrete basement and garage floors; concrete slabs for front and rear stoops; frame exterior walls with $3/4$ " x 10" redwood siding, with stucco gable ends; three coat plaster walls; oak flooring; pine B & B trim; 1 $3/8$ " six panel #1 pine doors; tile wainscote and floors in bathroom and lavatory; two kitchen cabinets; 266 lbs asphalt shingle roof with copper gutters and downspouts; modern bathroom fixtures; hot water heat; modern electrical installation; insulation in exterior walls and second floor ceiling.

This colonial type design is simple, efficient and enduring. The interior arrangement of rooms can be considered fair. While the construction is substantial and considered average in quality, all expensive details and appointments have been omitted. This is considered a good, average house in the medium price class.

More complete specifications for this standard house will be sent to any subscriber requesting them.



The costs of materials given in the accompanying table cover a completed structure except for the following items:

- Walks and drives
- Hot water heater and hot water tank
- Electrical fixtures
- Decoration to interior walls and ceilings

Several items of construction underwent changes during the twenty-seven years for which costs are given. Prior to 1921 a leg tub and wall lavatories were used instead of the full roll tub and pedestal type lavatory.

(Continued on Page 88)

MATERIAL COSTS OF A STANDARD SIX ROOM FRAME RESIDENCE BUILT IN ST. LOUIS

The chart at the top of page 88 shows the variations in the costs of materials for a six room frame residence built in Saint Louis. Floor plans and a picture of the house are shown on page 86. On the chart costs are grouped into four classifications. A further breakdown of these groups is

given in detail below. Columns of the table are numbered, and a brief description of the items included in each is given in the paragraphs below. Paragraphs are numbered to correspond with the columns described.

Group A:

(1) Mason Materials: Cement, sand, gravel, quick lime,hydrated lime, hard wall plaster, face and common brick, fire brick, flue lining.

(2) Tile Materials: 4½ x 4½ wall tile, ceramic floor tile, cap and base.

(3) TOTAL OF GROUP A.

Group B:

(4) Unfinished Lumber: Columns, beams, floor and ceiling joists, interior and exterior studs,rafters, bracing etc.

(5) Finished Lumber: Sub-flooring, sheathing, beveled siding, finished floors, asphalt shingle

roofing, roofing felt, tar paper, shutters etc.

(6) Mill Work: Windows, doors, trim, kitchen cabinet, stairs.

(7) TOTAL OF GROUP B.

Group C:

(8) Heating: Boiler, insulating jackets, fittings, tools, pipes, connections, valves and radiation.

(9) Plumbing: Soil pipes and connections, stack, water pipe and connections, lead, oakum and bathroom fixtures; hot water heater and tank to be furnished by others.

(10) TOTAL OF GROUP C.

Group D:

(11) Sheet Metal: Copper gutters and downspouts, copper flashing.

(12) Electrical Work: Main switch, BX cable, switch boxes, receptacles, transformer etc. No fixtures included.

(13) Nails and Hardware: Common and wire nails, bolts, damper, ash doors, finish hardware.

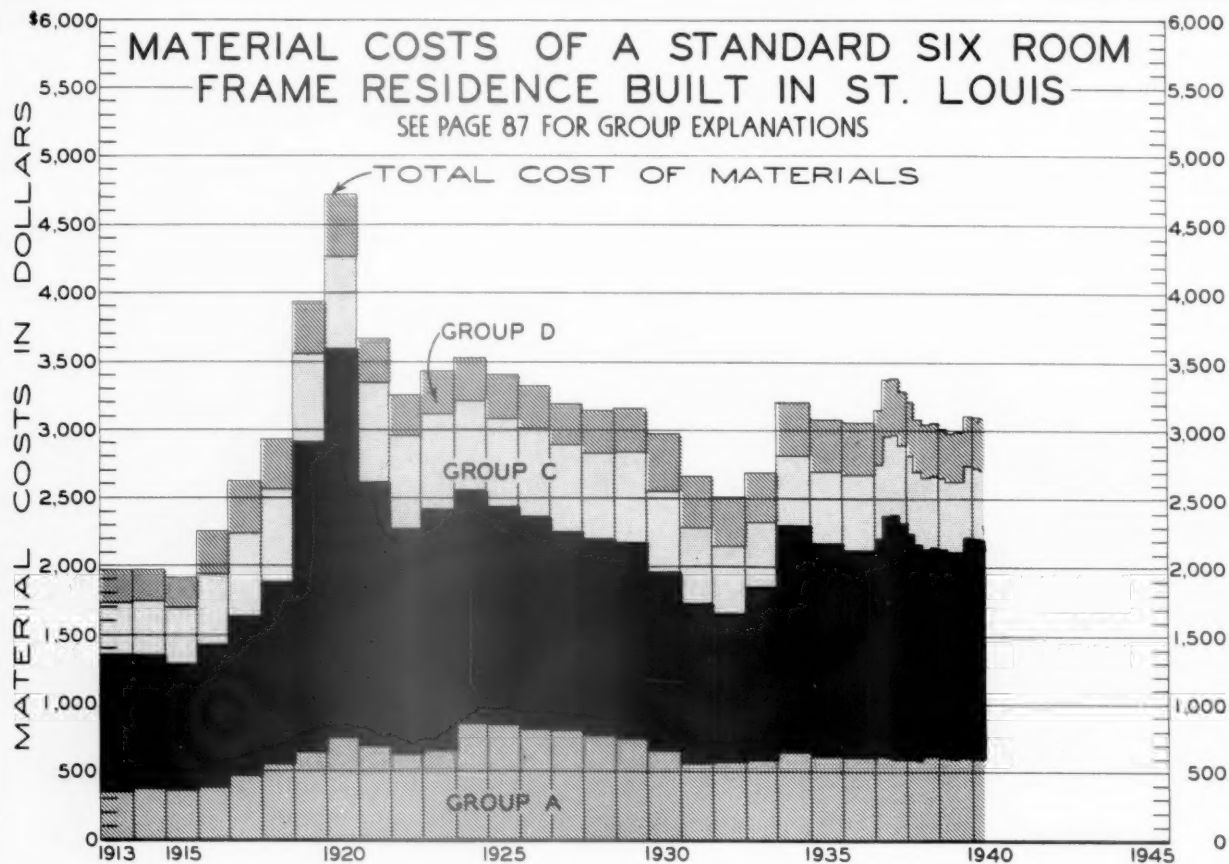
(14) Paint Materials: White lead, linseed oil, turpentine.

(15) Miscellaneous: Metal lath, wood lath, corner bead, insulation.

(16) TOTAL OF GROUP D.

(17) TOTAL COSTS OF MATERIALS.

	GROUP A			GROUP B				GROUP C			GROUP D					TOTAL COSTS	
YEAR	(1)	(2)	TOTAL (3)	(4)	(5)	(6)	TOTAL (7)	(8)	(9)	TOTAL (10)	(11)	(12)	(13)	(14)	(15)	TOTAL (16)	(17)
1913	\$343	\$ 24	\$367	\$218	\$ 428	\$ 350	\$ 996	\$152	\$231	\$383	\$ 65	\$36	\$16	\$ 59	\$ 51	\$227	\$1973
1914	362	24	386	212	415	349	976	147	248	395	59	32	16	59	50	216	1973
1915	360	24	384	189	373	329	891	152	249	401	68	38	17	64	48	235	1911
1916	366	24	390	224	438	363	1025	203	309	512	101	55	22	86	59	323	2250
1917	456	25	481	258	500	396	1154	244	359	603	108	59	26	110	69	372	2610
1918	539	25	564	292	570	449	1311	322	359	681	95	52	30	118	73	368	2924
1919	624	25	649	519	1008	729	2256	290	349	639	83	45	31	113	112	384	3928
1920	742	28	770	607	1189	1030	2826	305	372	677	83	46	36	143	132	440	4713
1921	674	25	699	479	920	506	1905	273	460	733	64	35	30	94	104	327	3664
1922	609	25	634	362	703	571	1636	258	433	691	64	35	28	79	81	287	3248
1923	633	25	658	410	793	551	1754	267	430	697	70	38	28	94	90	320	3429
1924	618	251	869	401	779	492	1672	274	388	662	64	35	35	97	87	318	3521
1925	606	251	857	375	732	472	1579	273	381	654	68	37	37	89	83	314	3401
1926	566	251	817	379	732	432	1543	264	381	645	69	37	36	86	83	311	3316
1927	565	251	816	354	715	358	1427	251	395	646	67	37	33	84	80	301	3190
1928	563	208	771	406	644	377	1427	261	382	643	71	39	31	85	74	300	3141
1929	565	185	750	360	687	384	1431	270	385	655	82	45	33	89	71	320	3156
1930	474	185	659	340	655	312	1307	251	341	592	71	39	33	72	211	426	2984
1931	411	155	566	313	594	254	1161	226	322	548	58	32	31	61	198	380	2655
1932	438	139	577	268	532	269	1069	210	286	496	50	28	28	60	199	365	2507
1933	457	130	587	355	562	344	1261	208	270	478	52	28	26	54	214	374	2700
1934	540	122	662	439	713	494	1646	234	279	513	55	30	26	63	222	396	3217
1935	508	111	619	399	638	523	1560	236	292	528	43	24	26	62	229	384	3091
1936	506	111	617	364	655	494	1513	255	301	556	50	28	27	59	221	385	3071
Jan. 1937	508	111	619	364	688	539	1591	239	308	547	59	32	28	64	227	410	3167
Apr. 1937	503	111	614	423	763	591	1777	246	335	581	55	30	31	64	227	407	3379
Jul. 1937	500	111	611	423	772	592	1787	250	332	582	53	29	31	64	227	404	3384
Oct. 1937	500	111	611	369	745	592	1706	255	330	585	48	26	30	65	223	392	3294
Jan. 1938	500	103	603	369	693	591	1653	255	313	568	48	26	29	68	223	394	3218
Apr. 1938	500	103	603	343	633	592	1568	231	305	536	45	25	27	68	222	387	3094
Jul. 1938	516	103	619	343	631	549	1523	239	285	524	45	25	27	64	221	382	3048
Oct. 1938	516	103	619	343	631	550	1524	239	283	522	48	26	28	64	221	387	3052
Jan. 1939	515	103	618	353	642	525	1520	239	284	523	49	27	28	64	192	360	3021
Apr. 1939	510	103	613	345	644	509	1498	239	267	506	48	26	29	64	192	359	2976
Jul. 1939	516	103	619	346	639	508	1493	239	271	510	46	26	29	64	191	356	2978
Oct. 1939	510	103	613	395	713	509	1617	239	285	524	52	29	30	65	193	369	3123
Jan. 1940	510	103	613	374	679	567	1600	236	282	518	58	32	30	65	193	378	3109
Apr. 1940	510	103	613	371	651	566	1588	236	285	521	63	35	30	65	193	386	3108



tory now specified. Prior to 1924, tile walls in bathroom and lavatory were omitted. Prior to 1930, insulation of both exterior walls and second floor ceiling were omitted.

The chart above shows the fluctuations in the costs of materials for a six room frame residence built in St. Louis. There are four major groups of materials shown on the chart. Group A consists of mason materials and tile; Group B of millwork, unfinished and finished lumber; Group C of heating and plumbing supplies; Group D of sheet metal, electrical supplies, nails and hardware, paint, insulation and other miscellaneous items. A study of this chart and the table on the preceding page shows some rather interesting facts about the cost of the materials which have gone into this house.

1. The lowest total material cost was \$1911 in 1915, and the highest cost was \$4713 in 1920, an increase of 147%, a change brought about largely as a result of the World War.

2. Lowest total material cost in the last ten years was \$2507 in 1932; the highest was \$3384 in the summer of 1937, an increase of 35%.

3. At the time the present war started in Europe, the total material cost was \$2978. At the present time it is \$3108. If it should rise as much in the next five years as it did from 1915 to 1920 as the result of the first World War, by 1945 it should total more than \$7400.

(Continued on Page 96)

THE MARRIAGE RATE IN METROPOLITAN AREAS

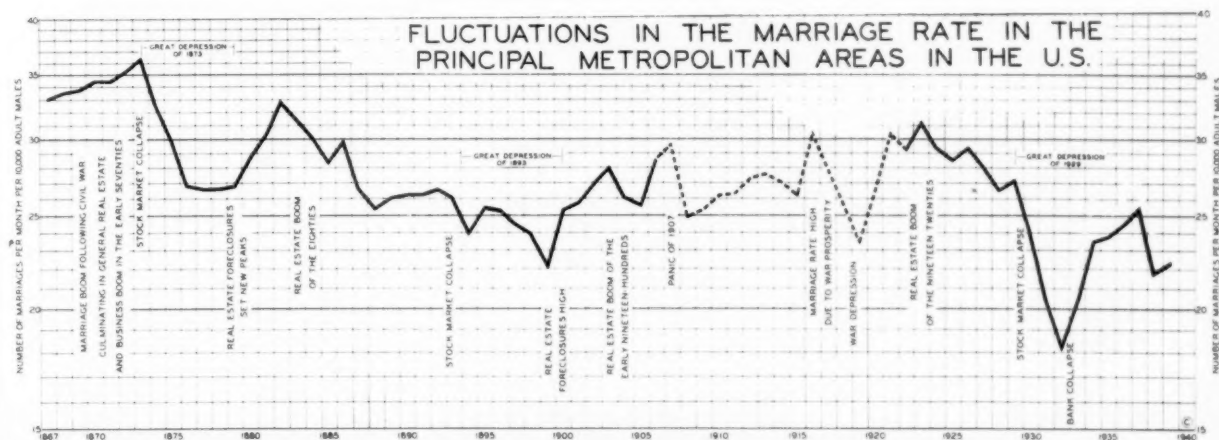
ONE year ago in the Real Estate Analyst we pointed out that the marriage rate had dropped rapidly during 1938, but we said, "We believe that the marriage rate will advance again in 1939." The chart at the bottom of the page shows that this was the case, although the rise was relatively small in proportion to the drop during 1938. This was due to the fact that most of the recovery in 1939 came in the latter part of the year, increasing the figures for the last few months only.

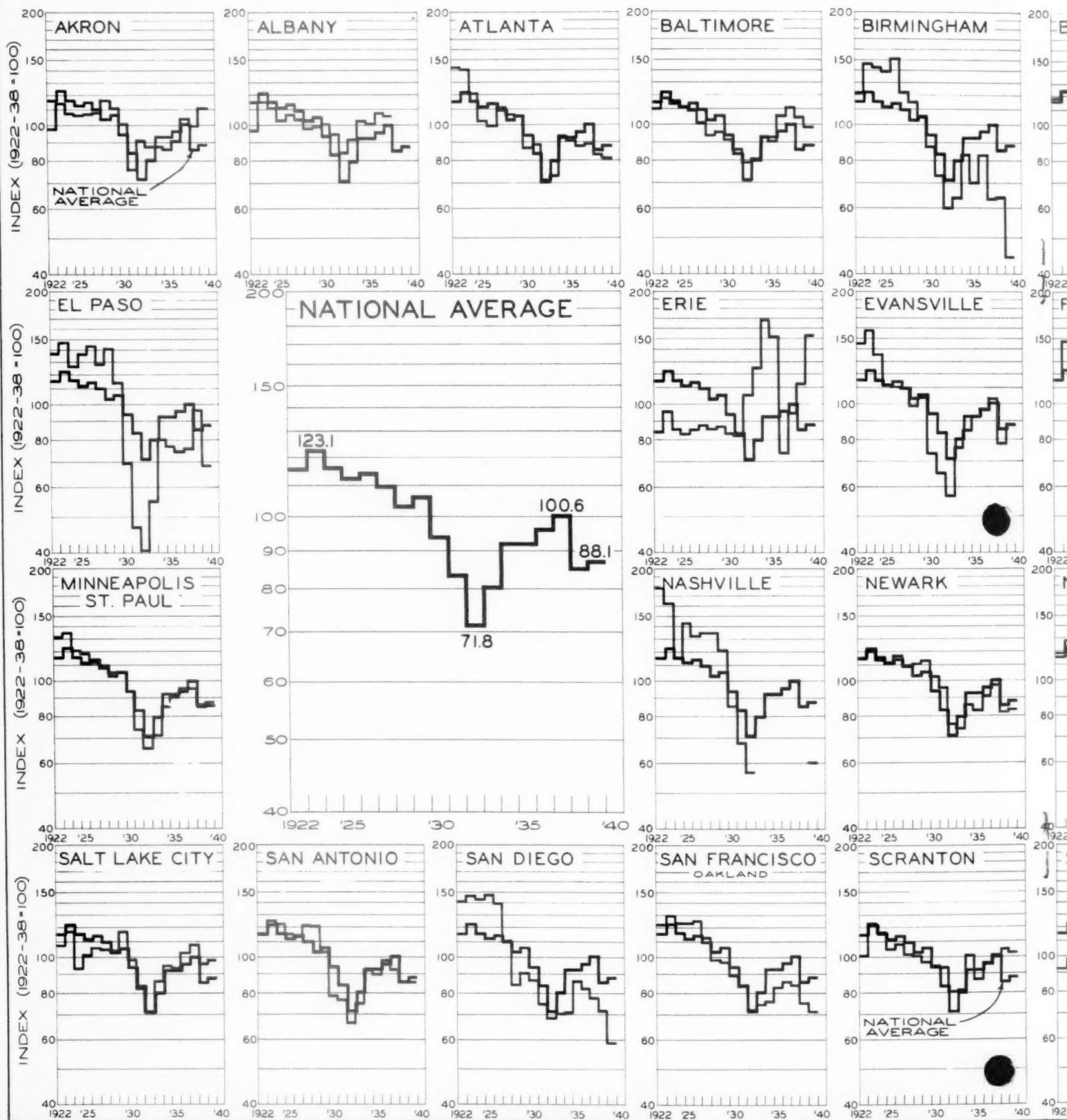
But why is the marriage rate important in a study of real estate and construction? The chart at the bottom of the page, showing the fluctuations of the marriage rate in the United States from 1867 to the present indicates quite clearly that every major depression is accompanied by a fall in the marriage rate, and that in every period of major recovery the marriage rate rises. This rise and fall in the number of new families being created effects the demand for housing accommodations, the percentage of vacancies and the average rent level.

The charts showing the fluctuations in the marriage rates, city by city, shown on pages 90-93, are drawn from computations by Real Estate Analysts, Incorporated, from records secured from all principal urban counties of the United States. In compiling our figures for any city we have included with that city each of the surrounding counties which had a marriage rate at least three times the average of the state. This has been done to include all outlying "Gretna Greens."

In studying the marriage rates for any city, features in the marriage license laws of that state and adjoining states must be kept in mind. If one state adopts a pre-marital health test, while surrounding states have no similar requirements, cities near the border of the first state will show a drop in the rate during the early period of the law, since many couples will escape its provisions by marrying in the adjoining state. This will cause the rate in the second state to increase.

The map at the bottom of page 98 classifies the various states on the basis of legislation affecting marriages. We have shown two types of
(Continued on Page 98)



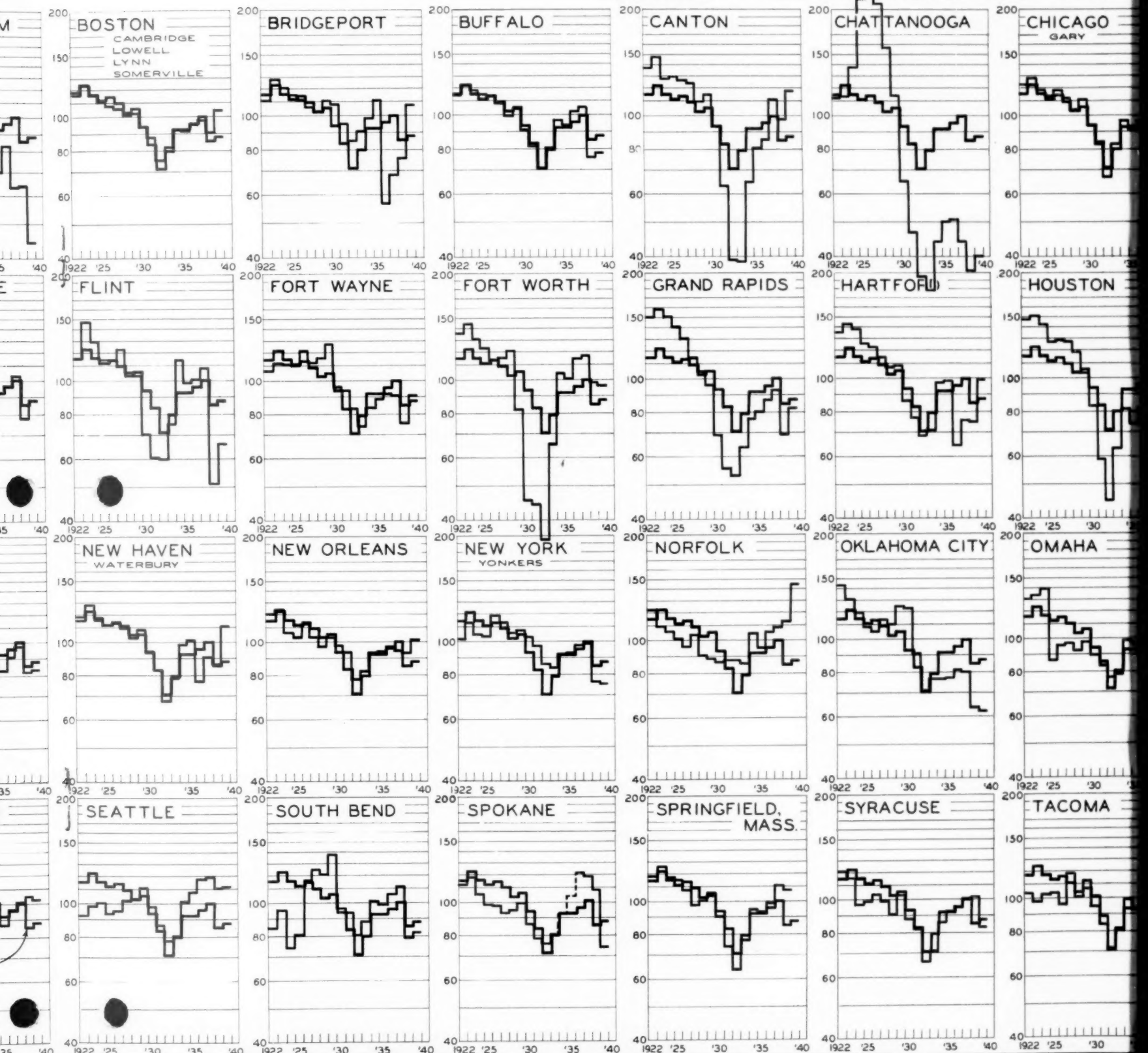


SEE MAP ON PAGE 98 FOR LEGISLATION AFFECTING MARRIAGE

FLUCTUATIONS IN THE MARRIAGE RATE

1922 — 1938

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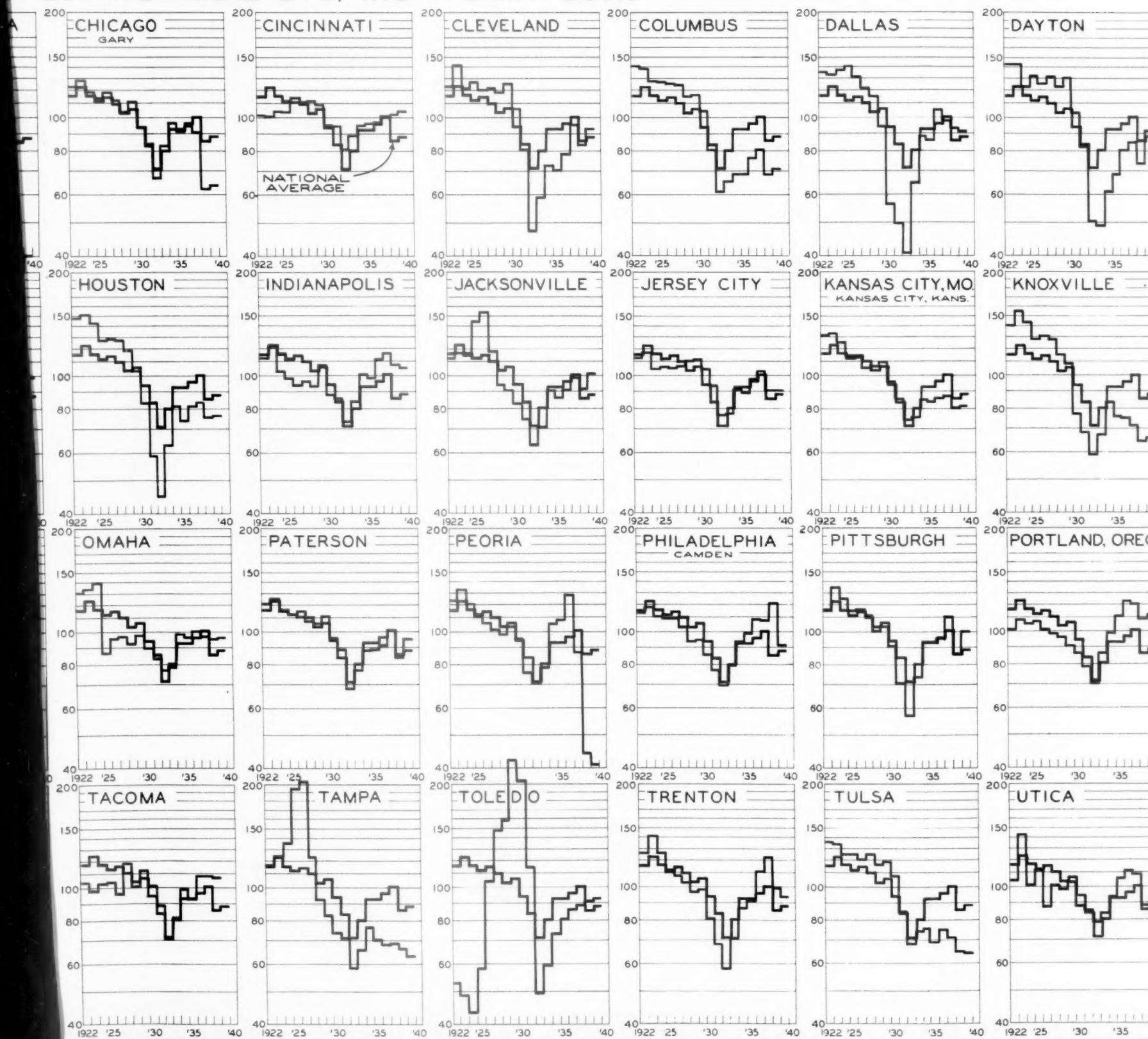


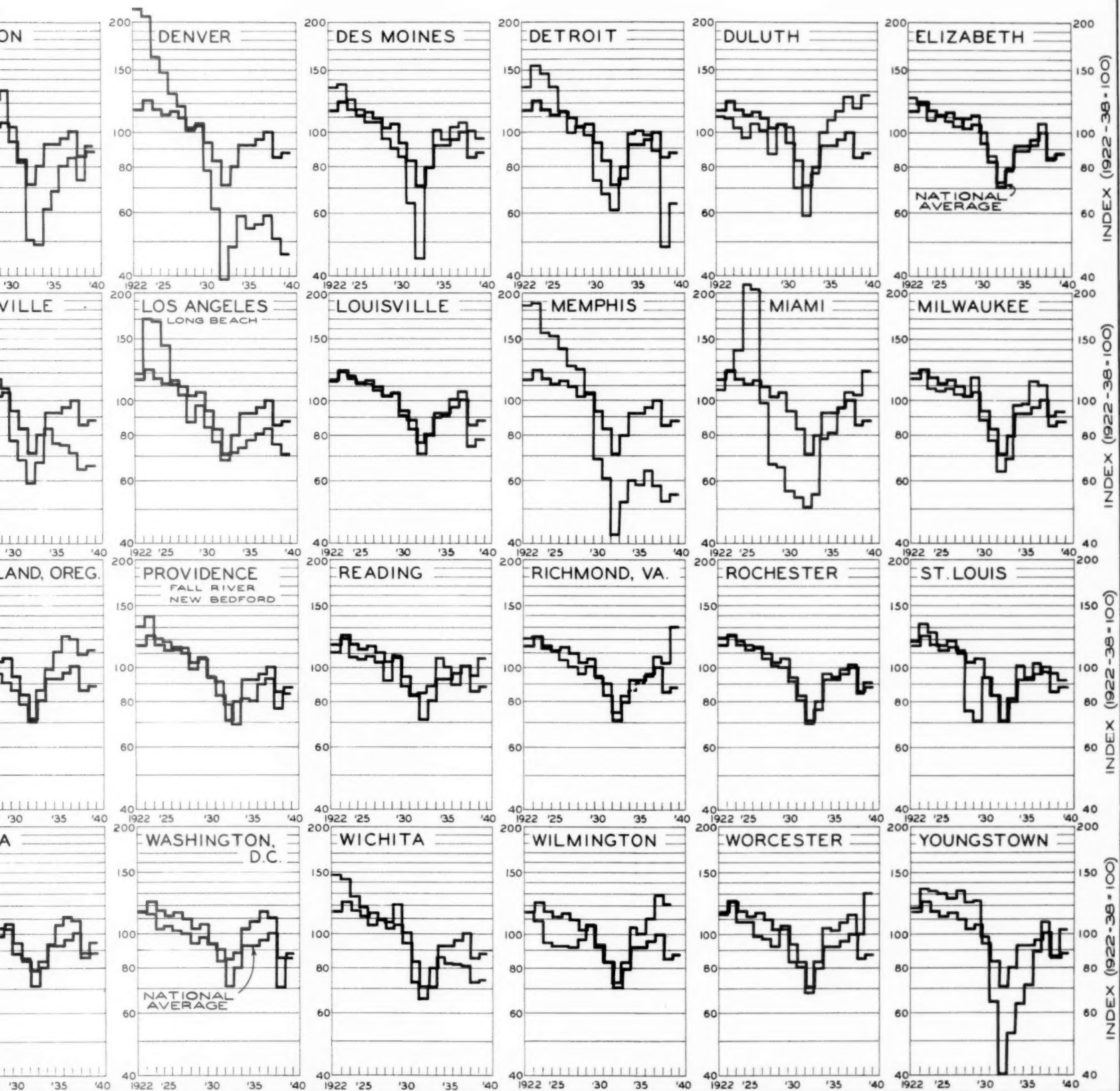
MARRIAGE RATE

MARRIAGE RATE IN PRINCIPAL CITIES

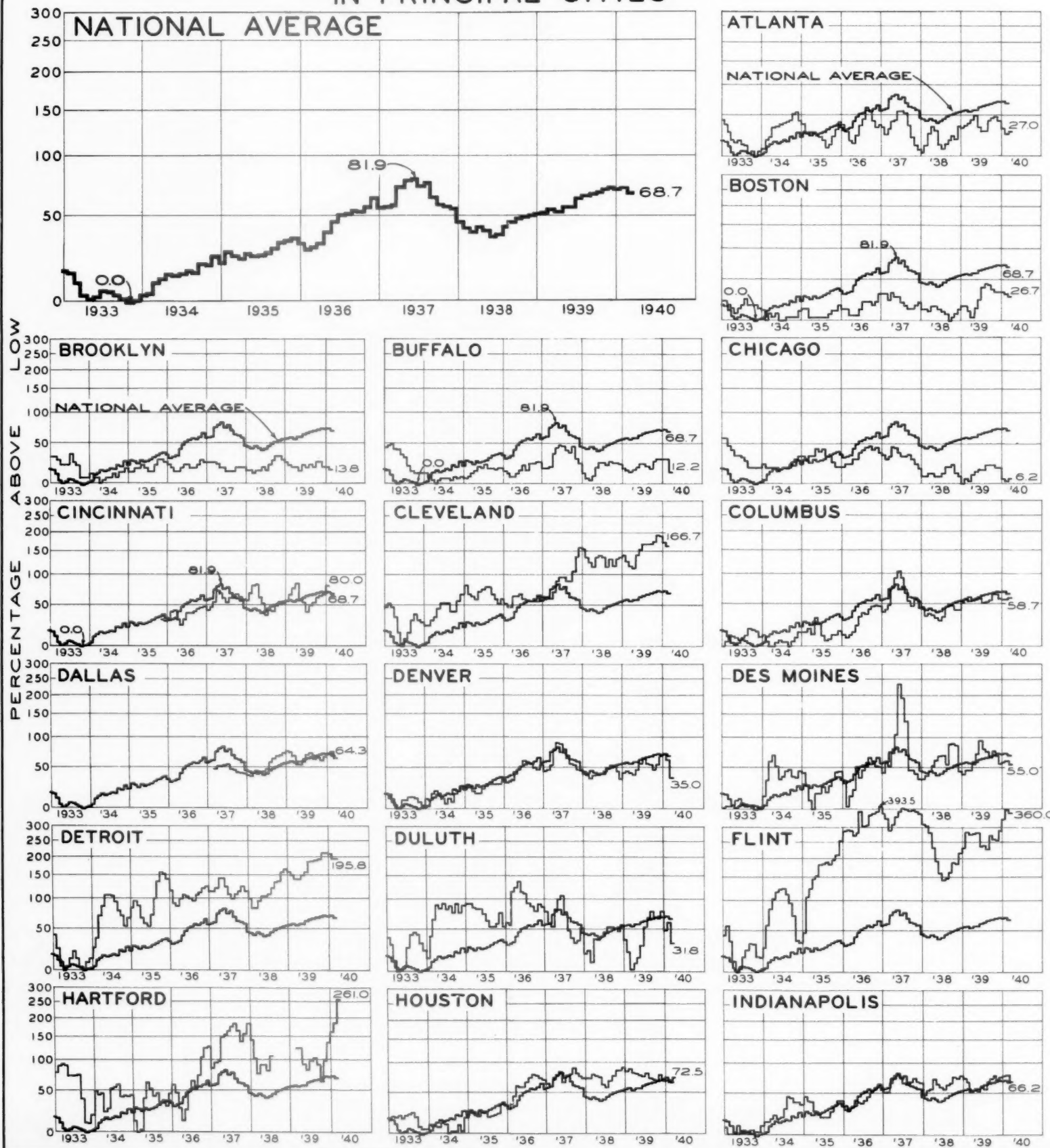
1922 — 1938 = 100

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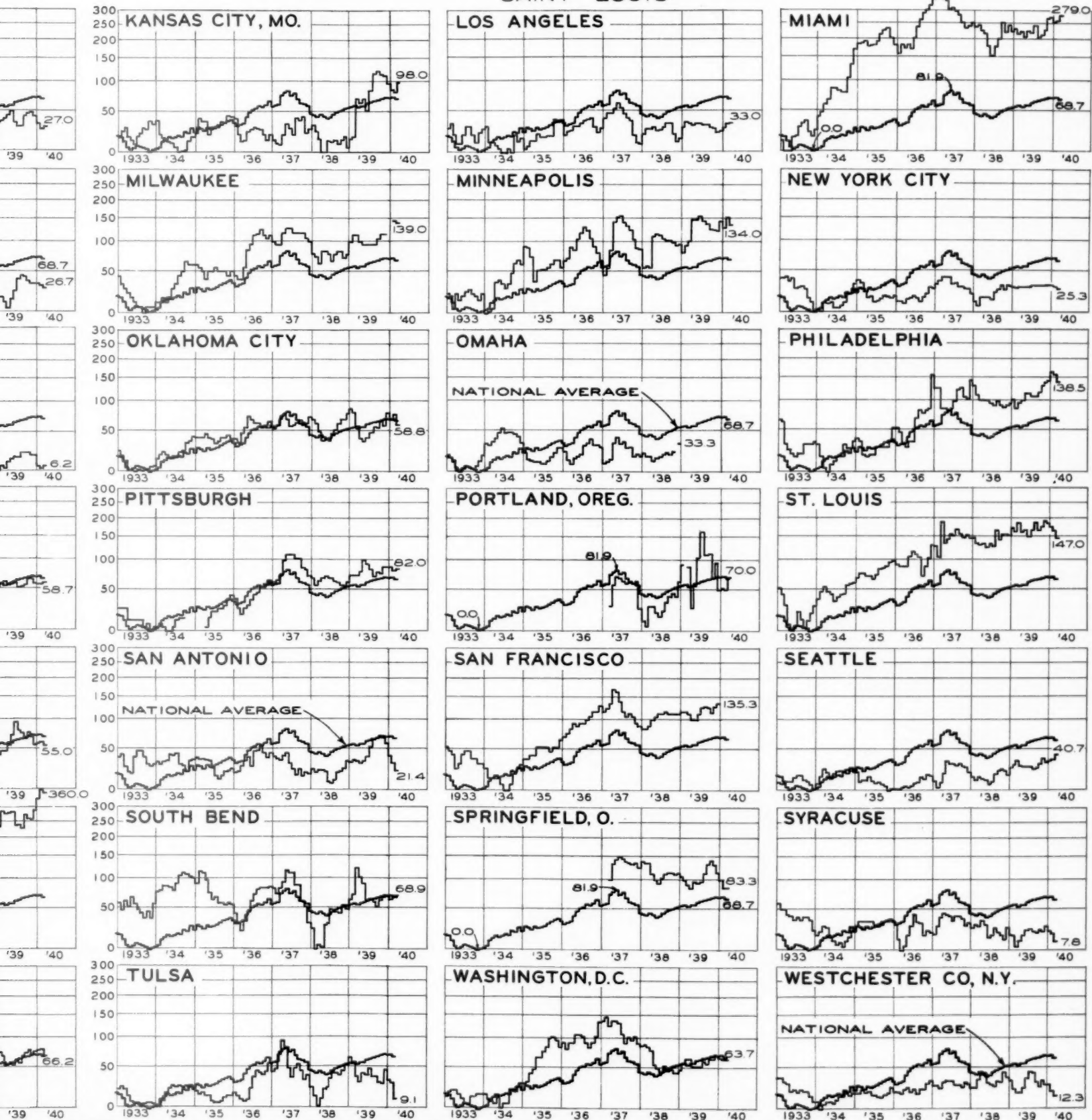




REAL ESTATE TRANSFERS IN PRINCIPAL CITIES



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SAINT LOUIS



EXPLANATION OF THE TRANSFER CHARTS

THE charts on the page opposite show the fluctuations in the voluntary transfers of real estate from 1933 to the present. The black line on each chart shows the monthly fluctuations of voluntary transfers as a percentage above the low point for that city. The red line is identical on all charts and shows the typical reactions of all cities on which figures are available. All figures have been corrected for seasonal influences.

For some cities it has been possible to secure far more accurate figures on voluntary transfers than for others. This is due to differences in local custom of handling sales and recording. This has necessitated a difference in the method we have used of accumulating our totals.

A warning might be expressed here against the use of figures on "Instruments recorded" often given out by recorders and sometimes used as a business index. These figures generally are a great many times larger than voluntary transfers, since they include foreclosures, mortgages and miscellaneous recordings. Foreclosures are generally down when voluntary transfers are up and vice versa. A total which includes both will be relatively too high during a depression and too low during a period of real estate activity, as the voluntary and involuntary transfers have a tendency to cancel each other.



(Continued from Page 88)

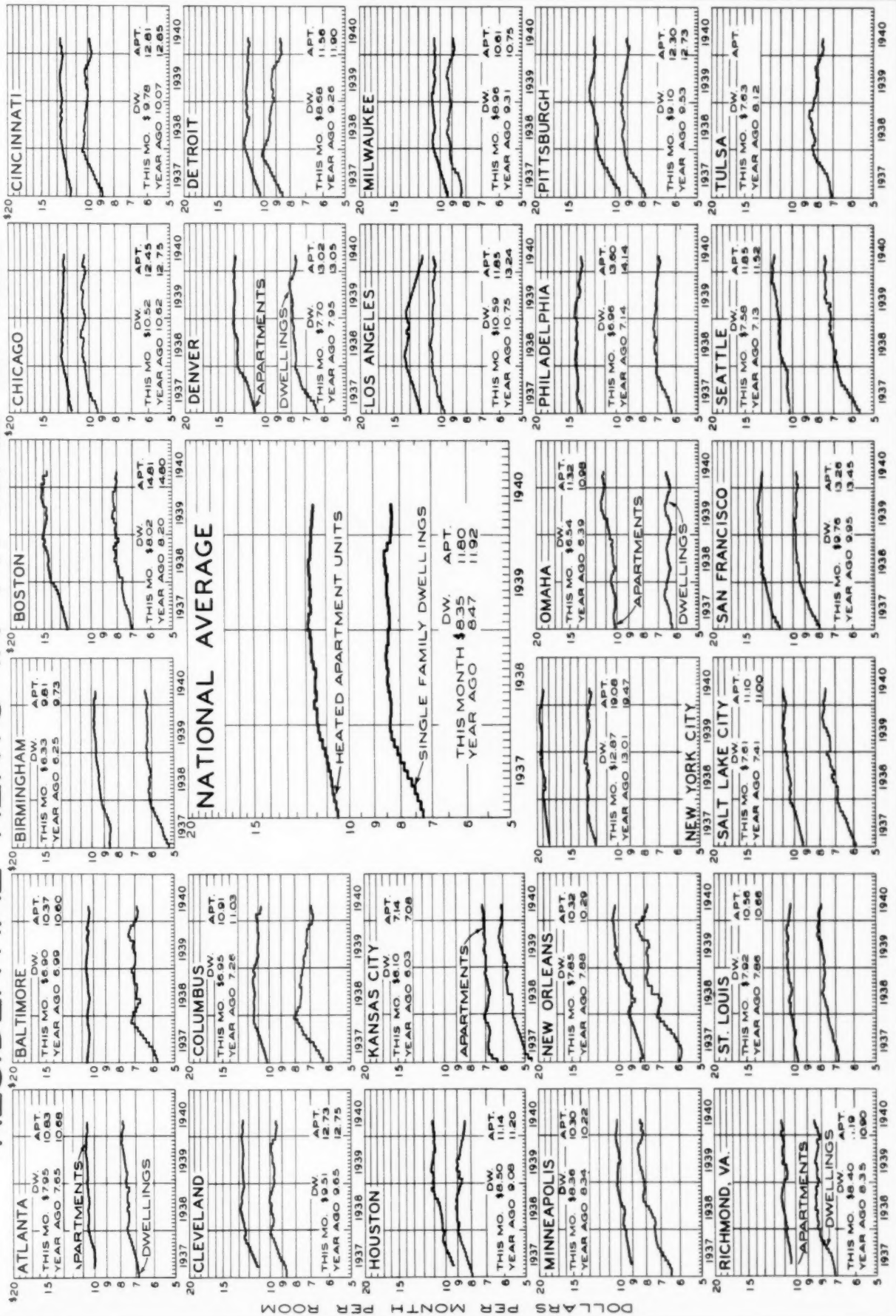
It is impossible to guess at the present time whether this is probable or not, but if the war continues, an inflation of cost of this sort is certainly possible.

4. It is quite interesting to notice the behavior of the individual groups of materials. The unfinished lumber group today is 96% above the low in 1915, and 61% of the peak price of 1920. On the other hand, plumbing materials are only 67% above the low, and at the present time, are 79% of the high in 1920. In both lumber and plumbing materials the increase in freight rates has played an important part in the cost increase. It should be borne in mind, however, that the plumbing fixtures figured in 1940 are far superior to those of 1915 and 1920, while the lumber does not show the same degree of improvement.

Paint materials are now 88% above the low in 1915, and are 81% of the high in 1925. Finished lumber is 74% above the low in 1915, and 55% of the high in 1920. Millwork is 72% above the low in 1915 and 55% of the high in 1920.

One of the best showings is made by the hardware group with prices 20% above the low of 1914 at the present time, and 45% of the high of 1920.

RESIDENTIAL RENTS IN TYPICAL CITIES



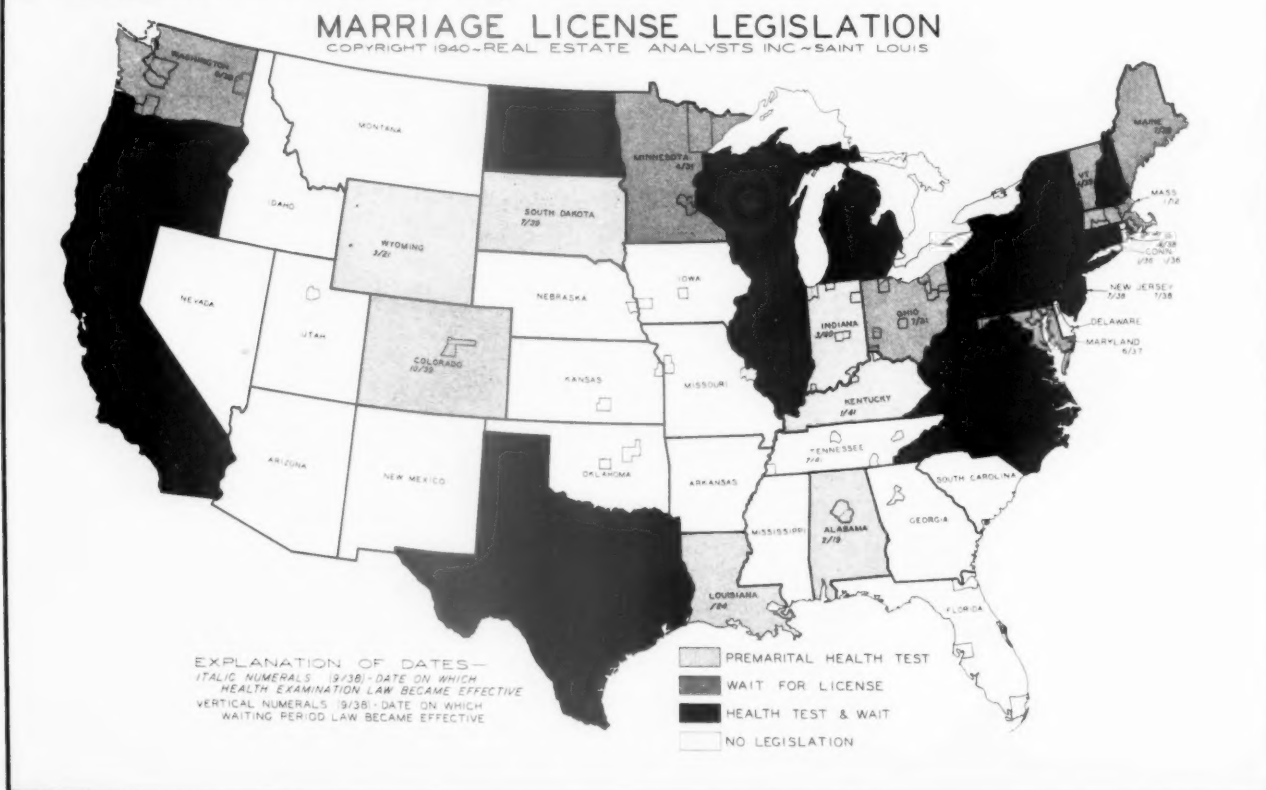
marriage laws only--those dealing with health tests and those providing for a waiting period. Seven states not shown as having legislation require an affidavit from license applicants, but this form of regulation is hardly rigorous enough to materially affect statistics.

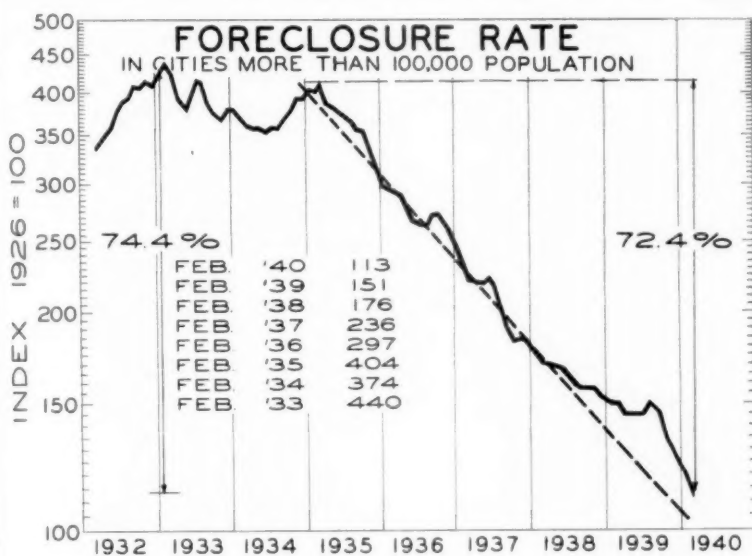
Many states will have two dates under the name of the state. The figures in italics show the month and year when a physical examination law became effective; the date in upright figures indicates the beginning of legislation providing for a waiting period. On this map urban counties which have been used for each city are indicated.

While changes in local legislation may affect for a while the marriage rate in cities close to a state border, the national rate is not affected by this redistribution between cities, as all cities of any importance in all states are included in our national figures.

The relationship of the marriage rate in any particular city to the national average will give some idea of the increasing or decreasing demand for housing accommodations in the community in question. If the marriage rate is increasing faster than the national average, we believe it is a rather safe assumption that the demand is also increasing faster than it is in the average city. Of course, in trying to evaluate the various cities on this basis, the effect of legislation in either the state in question or in adjoining states must be taken into consideration.

We think that the marriage rates for 1940, if business continues at its present or a higher level, will again increase over the 1939 figure. If it does not, we may see a further increase in residential vacancy, with a continuation of the sideways movement in rents.





THE chart to the left shows the monthly fluctuations in the foreclosure rate in cities having more than 100,000 population. This chart is corrected for seasonal fluctuations, and is based on the compilations made by the HOLC. The dashed line in red shows the trend at which foreclosures have been dropping since 1934.

For about six months in 1939 this drop was retarded, but the accelerated drop of the last six months

is bringing the foreclosure rate back to the old relationship. We believe that the drop will continue for the next few months.

THE table and the chart below show quite clearly that within the past month the FHA is resuming the levels of a year ago in contrast with the slump of the preceding four months.

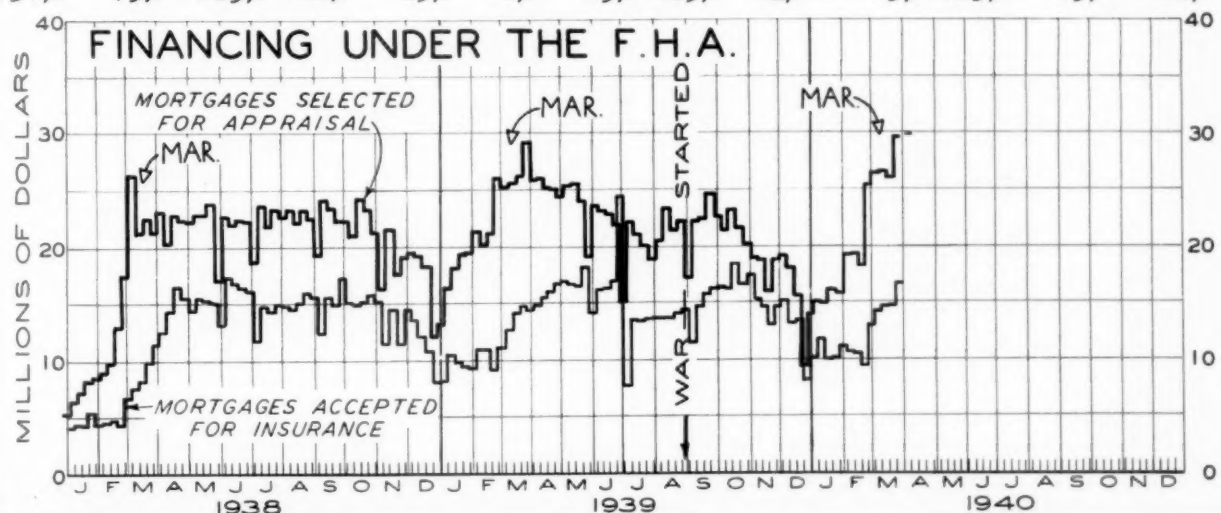
Mortgages selected for appraisal set a new all time high the second week in April. Complete figures for the month of April are not yet available. Mortgages accepted for insurance in March exceeded a year ago.

Mortgages Selected for Appraisal Compared with Year Ago

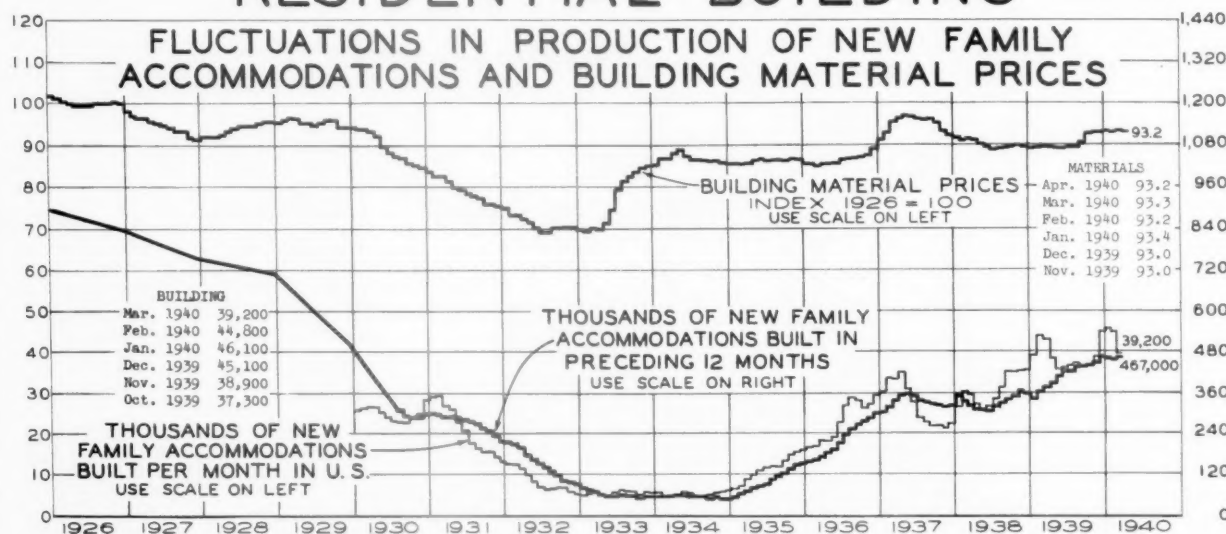
Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
+29%	+12%	+14%	+4%	-11%	-8%	-8%	+2%	-4%	-13%	-9%	-2%	-6%

Mortgages Accepted for Insurance Compared with Year Ago

+58%	+3%	+19%	+11%	-13%	-6%	-9%	+13%	+2%	+5%	+15%	+9%	+1%
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RESIDENTIAL BUILDING



THE black line on the chart above shows the fluctuations in wholesale building material prices computed on a base of 1926=100. The light red line shows in thousands the number of new family accommodations provided for by building permits each month. This line is corrected for

seasonal variations. The heavy red line shows the fluctuations in thousands of new family accommodations provided for by building permits for the preceding twelve months.

BUILDING BY REGIONS



The nine charts above show new residential building monthly by regions, compared with the national average, printed in red. The figures have been adjusted for seasonal fluctuation, and are charted as the number of new accommodations per month per 10,000 families. The indexes for the Middle Atlantic states and for the national average have been corrected for the change in 1938 in the New York City building code.

IN spite of the drop in general business activity, new residential building is holding its own with the prospect of further gains this spring. While building material prices have not advanced since last fall, they, too, have held their own with a prospect of further rises ahead. This is in accordance with our forecasts of last fall. Three of the nine regions showed an advance over February.



RECOVERY BULLETIN

APRIL 26
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Real Estate Economists, Appraisers and Counselors

Roy Wenzlick
Editor

VOLUME IX

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GENERAL business has been going sideways during the past month at a level 7.4% above a year ago but 12.1% below December 1939. Real estate activity as shown on the chart above is showing a somewhat similar reaction. After reaching a point in December only 7.5% below normal, it has slipped back to 9.8% below. This is a vast improvement, however, over the corresponding month of a year ago when real estate activity was 15.8% below normal.

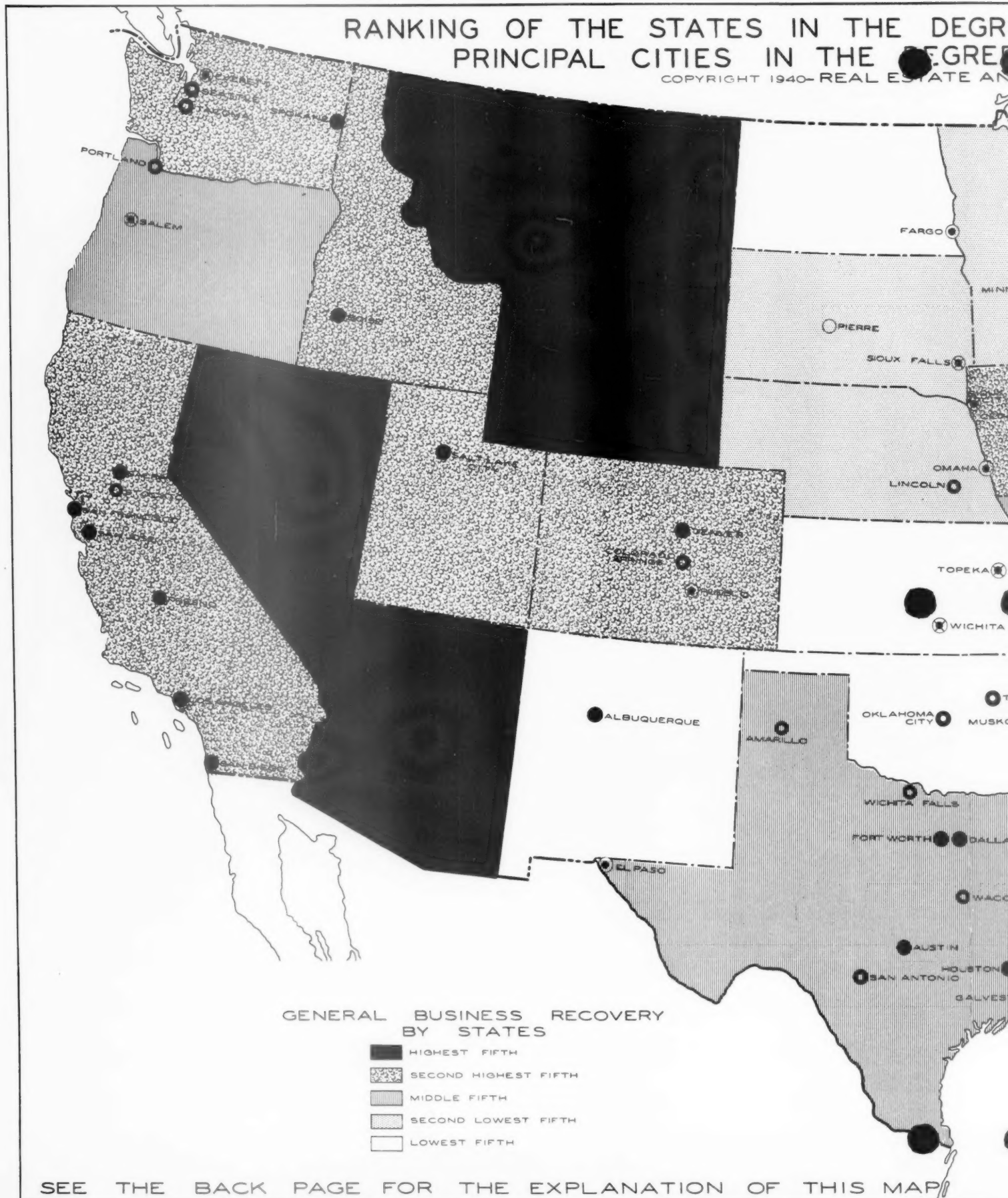
Foreclosures have continued their drop, reaching the lowest point in March since 1927. This accelerated drop of the recent past is partially due to the liberalizing policy of the HOLC, with a resulting drop in HOLC foreclosures.

The volume of mortgages declined slightly from the preceding month but was above the level of a year ago.

Residential rents followed the sideways movement which has continued now for two and a half years.

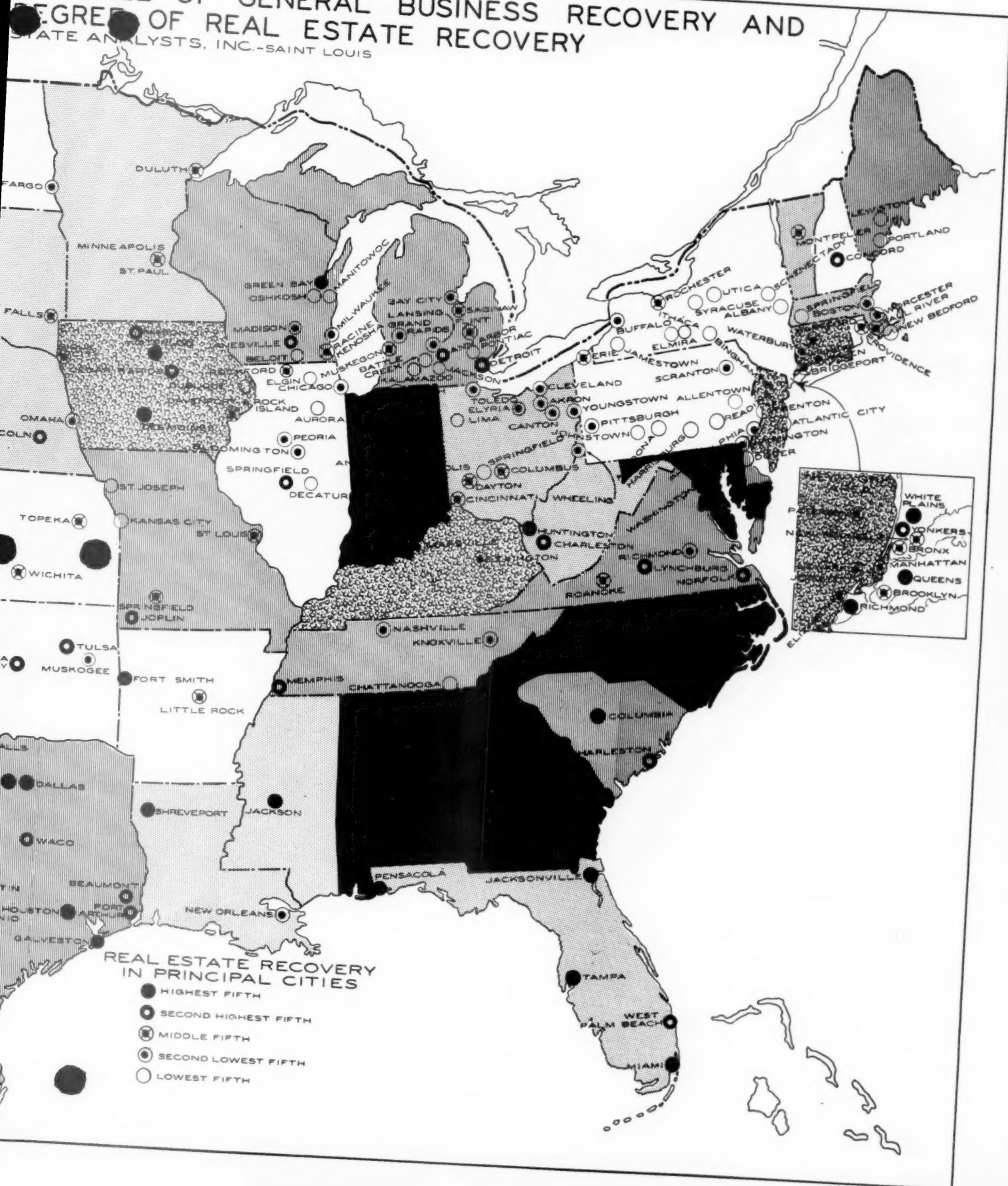
RANKING OF THE STATES IN THE DEGREE OF BUSINESS RECOVERY PRINCIPAL CITIES IN THE DEGREE OF BUSINESS RECOVERY

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DEGREE OF GENERAL BUSINESS RECOVERY AND DEGREE OF REAL ESTATE RECOVERY

STATE ANALYSTS, INC.-SAINT LOUIS



REAL ESTATE AND BUSINESS RECOVERY

THE map in this report shows general business recovery by states and relative real estate recovery by cities. The general business recovery is shown by the red shading; the real estate recovery by the black city symbols.

All states were divided into five groups on the basis of recent dollar payroll levels in relation to those levels during the past eight years. If dollar volume of payrolls during the past few months were high in relation to the levels of the past, the state was assumed to be in a prosperous condition. If, on the other hand, the level of payrolls was low in relation to the general averages of the past, it was assumed that the business men in that state would consider business very unsatisfactory.

The cities are grouped on the basis of the relative degree of real estate recovery. The ranking of each city is based primarily on the relative amount of building being done in each community. If we are right in our contention that new building is always the result of the relationship of rents and values to current construction costs, then new building will not proceed in any great quantity in any community until rents and values in that community have risen to a point where they are apparently high enough to pay a return on the current replacement cost. If a large residential vacancy yet exists in a certain community, clearly rents there cannot have risen to this point. If taxes are unusually high, rents must rise to the point where they will apparently show a net return above the high tax requirement. If a city is losing population, or not gaining population as rapidly as most other cities, it will take it longer to absorb residential surplus, meaning that rents will rise slower and that it will take longer for it to get to the point where new building can be done profitably in volume. If, on the other hand, the city is increasing rapidly in population, vacancy will be absorbed quite rapidly, rents and values will be at the point where there is an incentive to build, and a large amount of building will take place. The fact that new building is declining or advancing does not affect our index, as all cities are shown only on a relative basis. What we are trying to show in this particular study is not the degree of recovery but the relative standing of the various communities.

Government building has been excluded in arriving at our ranking of these cities as government building does not indicate whether or not rents have risen to a profitable level. All cities are ranked into either the highest fifth, the second highest fifth, the middle fifth, the second lowest fifth, and the lowest fifth. We consider this a more satisfactory arrangement than calling the first group high, the second above average, the third average, the next below average, and the last group low.

This chart as it has appeared in our reports in the past has been checked against results of national sales organizations with rather consistent results. Those cities which show up well on our map are generally those in which the greatest relative volume of business can be done.



APRIL 26
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EXECUTIVE DIGEST

OF THE CURRENT REAL ESTATE ANALYST REPORTS

REAL ESTATE ANALYSTS, INC.

Real Estate Economists, Appraisers and Counselors

Roy Wenzlick
Editor

VOLUME IX

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REAL ESTATE SALES on a seasonally adjusted basis declined in March by 2.3% but were 7.1% above March, 1939..... Page 101

FORECLOSURES dropped to the lowest point since 1926..... Page 99

RESIDENTIAL RENTS averaged for 26 cities showed practically no change..... Pages 97, 101

FHA INSURANCE ACTIVITIES are currently setting new all-time highs, forecasting a further improvement in residential building..... Page 99

NEW RESIDENTIAL BUILDING in the 95 leading metropolitan areas for the first three months exceeded a year ago by 9% in the number of new units..... Pages 75-82, 100

BUILDING COSTS, after the rise in September, have shown practically no change in the last five months..... Page 100

BUILDING MATERIAL COSTS of a standard six-room frame house are now 24% higher than they were in 1932, but 8.2% less than in 1937. From 1915 to 1920 the cost increased by 147%, largely as a result of the World War. Since the present war started, costs have advanced by 4.4%... Pages 85-88

The MARRIAGE RATE affects the demand for real estate. It increased during the last half of 1939 in most of the 93 cities charted. Pages 89-93

REAL ESTATE RECOVERY when charted by cities has been most pronounced in the Southeast, Southwest and far West. A wide band of cities, extending from New England, through Pennsylvania and westward, has had relatively little recovery. GENERAL PROSPERITY, however, when measured by increases in payrolls, was widespread over the entire United States--in two thirds of the states exceeding the levels of any of the last six years.

Pages 102-104

It is probably necessary to house the very poor at government expense, but if the government contemplates the expansion of its program to the point that self-respecting citizens who have always paid their own way are persuaded to clamor for federal housing as a right, it is time to call things by their right name. GOVERNMENT HOUSING is charity and the subsidies necessary must be paid by all of the rest of the people who do not live in government housing..... Page 83

The summary above is prepared monthly for the busy executive and high spots the material in the April, 1940, reports. On the pages indicated detailed material will be found, much of it on a city-by-city basis.